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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,444	03/01/2004	Mark W. Casebolt	5486-0229PUSI	9990
67321 7590 10/30/2007 BIRCH, STEWART, KOLASCH & BIRCH, LLP 8110 GATEHOUSE ROAD SUITE 100 EAST FALLS CHURCH, VA 22040-0747			EXAMINER NGUYEN, JENNIFER T	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 10/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/788,444	Applicant(s) CASEBOLT ET AL.	
	Examiner Jennifer T. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 18, 19, 21 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 4, 10-17, 20 and 22-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/1/04; 3/1/04; 3/1/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-7, 18-19, and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Gordon et al. (Patent No.: US 6,995,748).

Regarding claims 1 and 18, Gordon teaches a computer input device (i.e., mouse 10, fig. 2), comprising:

an electronic imager (i.e., optical motion sensor 16) positioned to create images of portions of a surface (6) moving relative to the imager (col. 3, lines 25-34);

an illumination source (i.e., light source 2) positioned to illuminate the portions of the surface imaged by the imager (col. 3, lines 25-34); and

at least one controller (i.e., light controller 166) coupled to the imager and the illumination source and configured to:

selectively activate the illumination source (2),

receive the images from the imager,

determine, based on at least some of the images, an imager velocity relative to the surface (col. 3, lines 35-60),

activate the illumination source at one of at least three activation rates when the

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imager is moving relative to the surface and imager velocity is being determined, and
select one of the at least three activation rates based at least in part upon the
imager velocity (col. 4, lines 45-59, col. 5, lines 14-45, col. 7, lines 5-22).

Regarding claim 2, Gordon teaches the computer input device is a battery-powered,
optically-tracking computer mouse (col. 3, lines 25-29).

Regarding claim 3, Gordon teaches the controller is further configured to: determine an
imager acceleration relative to the surface, and
select the illumination source activation rate based on the imager velocity and the imager
acceleration (col. 5, lines 14-45).

Regarding claim 5, Gordon teaches a memory having at least one user profile parameter
(i.e., movement information) stored thereon, and wherein the controller is further configured to
vary the illumination source activation rate based on the imager velocity, the imager acceleration
and the at least one user profile parameter (col. 5, lines 14-45, col. 6, lines 41-59).

Regarding claims 6 and 7, Gordon teaches a proximity detector (inherent in optical
fingerprint sensing pointing device, col. 8, lines 18-19), and wherein the controller is further
configured to vary the illumination source activation rate between a reduced standby rate and one
of the at least three rates based at least in part on an output of the proximity detector (col. 7, line
55 to col. 8, line 19).

Regarding claim 19, Gordon teaches comprising additional data representing sequences
of instructions which, when executed by a processor (162), cause the processor to perform
additional steps comprising: determining an imager acceleration relative to the surface; and

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selecting the illumination source activation rate based on the imager velocity and the imager acceleration (col. 4, lines 45-59, col. 5, lines 14-45, col. 7, lines 5-22).

Regarding claim 30, Gordon teaches a computer input device, comprising:

a sensor (i.e., optical motion sensor 16) positioned to detect changes in a measurable parameter (col. 3, lines 25-34);

a power source (i.e., light source 2); and

a controller (i.e., light controller 166) coupled to the sensor and the power source, and configured to:

selectively activate the sensor,

receive data from the sensor,

determine, based upon the received data, a sensor velocity,

activate the sensor at one of at least three activation rates when the sensor velocity is being determined, and

select one of the at least three activation rates based at least in part upon the sensor velocity (col. 4, lines 45-59, col. 5, lines 14-45, col. 7, lines 5-22).

Regarding claim 31, Gordon teaches an illumination source (2), and wherein:

the sensor (148) is a light-sensitive imaging array, and

the received data comprises image data of a tracked surface movable with respect to the array (col. 3, lines 25-48).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 9, 21, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (Patent No.: US 6,995,748) in view of Feldmeier et al. (Patent No.: US 7,220,956).

Regarding claims 8 and 21, Gordon teaches a computer input device, comprising:

an electronic imager (i.e., optical motion sensor 16) positioned to create images of portions of a surface moving relative to the imager (col. 3, lines 25-34);

an illumination source (i.e., light source 2) positioned to illuminate the portions of the surface imaged by the imager (col. 3, lines 25-34); and

at least one controller (i.e., light controller 166) coupled to the imager and the illumination source and configured to:

selectively activate the illumination source,

receive the images from the imager,

determine, based on a first set of images received from the imager, an imager velocity relative to the surface, and

estimate an imager displacement relative to the surface based on the imager velocity (col. 4, lines 45-59, col. 5, lines 14-45, col. 7, lines 5-22).

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Gordon differs from claims 8 and 21 in that he does not specifically teach an elapsed time since movement from a position corresponding to one or more of the images of the first set.

Feldmeier teaches an elapsed time since movement from a position corresponding to one or more of the images of the first set (col. 3, lines 10-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the elapsed time as taught by Feldmeier in the system of Gordon in order to control the sampling rate, resulting in reduce power consumption.

Regarding claim 9, Gordon teaches the computer input device is a battery-powered, optically-tracking computer mouse (col. 3, lines 25-29).

Regarding claim 29, Gordon teaches said selectively activating comprises selectively activating a light emitting diode (col. 3, lines 35-48).

5. Claims 4, 10-17, 20, and 22-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure: Patent No.: US 7,064,311 and 7,161,586.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
10/22/07



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